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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/402,726	10/08/1999	GERHARD KOCK	KOCKPCT	6324

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COLLARD & ROE
1077 NORTHERN BOULEVARD
ROSLYN, NY 11576

EXAMINER

MCCHESENEY, ELIZABETH A

ART UNIT	PAPER NUMBER
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2644

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DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/402,726

Applicant(s)

KOCK, GERHARD

Examiner

Elizabeth A McChesney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 and 6-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 6-8 and 10-16 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 2, 6, 7, 15 and 16** are rejected under 35 U.S.C. 102(e) as being anticipated by Ohkubo et al. (US Patent No. 5,862,240).

Regarding **claim 16**, Ohkubo et al. (hereinafter, "Ohkubo") discloses a microphone device which includes at least three microphones (M_1 , M_2 and M_3) disposed in the state spaced by predetermined distances in a direction perpendicular to the main axis of directivity which reads on the sound recorders displaying directional characteristics and are arranged that the axes (R_1 , R_2 and R_3) of their main receiving directions each point to a reference position (sound source S) within a utility zone (abstract and see figure 10). Ohkubo further discloses an adder for adding output signals from the respective microphone elements (abstract and figure 1), which reads on a summation facility for the amplitudes of the signals.

Regarding **claim 2**, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo further discloses the microphones are arranged on the

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circumference so that they are positioned an equal distance ($R1-R2=R3$) with respect to the sound source S (see figure 10 and col. 7-lines 37-42), which reads on the claimed limitation.

Regarding **claim 6**, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo further discloses the sound recorders are microphones, which reads on acoustic-electric transducers (see figures 1, 8, 10 etc.).

Regarding **claim 7**, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo further discloses introduction holes (31A, 32A, 33A, see figure 13), which reads on input valves, and are fed to acoustic-electric transducer 35.

Regarding **claim 15**, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo discloses three microphones disposed in a single plane which may be arranged on the circumference so they are positioned at equal distances $R1=R2=R3$ which reads the claimed limitation.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 3, 4, 8, 10, 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkubo et al. (US Patent No. 5,862,240).

Regarding **claim 3**, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo does not show the varying distances, however, Figure 10 shows time delays, which reads on transmission time elements. It would have been obvious to one of ordinary skill that a time delay would exist due to the transmission distance from the sound source to the microphones.

Regarding **claim 4**, Ohkubo discloses everything claimed as applied above (see claim 3). Ohkubo further discloses the transmission time elements, which reads on time delays wherein the transmission dimensions (31, 32, 33) provide different passages however the distances are equal to each other (col. 9-lines 31-50 and figure 13). Therefore it would have been obvious to one of ordinary skill in the art to provide transmission dimensions that are consistent of equal of all the sound recorders but can have different passage paths, which are adjustable in the sense that they are constructed differently.

Regarding **claim 8**, Ohkubo discloses everything claimed as applied above (see claim 16). It would have been obvious to one of ordinary skill in the art to provide a focal distance for the ideal position for the embodiment of Figure 10, otherwise it would have provided a poor result.

Regarding **claim 10**, Ohkubo discloses everything claimed as applied above (see claim 16). It would have been obvious to one of ordinary skill in the art to manually move the microphone arrangement as a whole to follow a moving sound source, which reads on adjusting an arrangement of sound recorders to follow the set point.

Regarding **claim 11**, Ohkubo discloses everything claimed as applied above (see claim 10). It would have been obvious to one of ordinary skill in the art to provide a manual swivel or tripod for support and aiming for moving the microphone arrangement as is conventionally done.

Regarding **claim 12**, Ohkubo discloses everything claimed as applied above (see claim 10). It would have been obvious to one of ordinary skill in the art to manually move the microphone arrangement as a whole to follow a moving sound source, which would result in manually controlling the transmission time elements or time delays via the manual movement (i.e. moving closer to produce smaller time delays or further away for longer time delays).

5. **Claim 13 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkubo et al. (US Patent No. 5,862,240) in view of Sibbald et al. (US Patent No. 5,600,727).

Regarding **claim 13**, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo fails to disclose a positive structure for determining the position of the sound source. The claim states that determining the position of the sound source "can be" done by measuring the time delay variances of the sound recorders. Sibbald et al. (hereinafter, "Sibbald") discloses deriving the distances and displacement of the microphones from a reference point by measuring the time-of-flight measurements, which reads on measuring the time delay variances (abstract) and therefore provides the position of the sound source in relation to the microphones. It would have been

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obvious to one of ordinary skill in the art to modify Ohkubo in view of Sibbald to provide the position of the sound source via the measurement of the time delay variances of the sound recorders for accurate sound set point position for better overall recording.

Regarding **claim 14**, Ohkubo discloses everything claimed as applied above (see claim 16). Sibbald further discloses a signal processor 30 inspects the signals of the microphones wherein the transmission time element (time delay) is determined by the signal processor (col. 3-lines 10-22).

Response to Arguments

6. Applicant's arguments, see pages 4-6 of Paper No. 7, filed 3-3-04, with respect to the rejection(s) of claim(s) 2-3, 5-6 and 15-16 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ohkubo et al. (US Patent No. 5,862,240) pertaining to the essential concepts of the claims regarding sound recorders having directional characteristics and arranged so their axes point to a reference position wherein they are further connected to a summation facility.

Conclusion

7. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. McChesney whose telephone number is (703) 308-4563. The examiner can normally be reached Monday – Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231


Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

EAM *gmm*
May 21, 2004


FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER